

14 Assessment tool

14.1 The development of an assessment tool

Background

The CEMACH 'Why Mothers Die 2000-2002'⁹⁴² report suggested that 'A national guideline for a booking clinic 'risk assessment' chart should be developed to identify those pregnant women for whom midwifery-led antenatal care and birth can be advised, and those for whom specialist or joint care is more appropriate'. The report recommended that every woman should be 'offered the type of care that most suits her own particular requirements'.

This view was supported by the National Service Framework's guidance on maternity services⁹⁴³ which sets the standard of giving women '...easy access to supportive high quality maternity services designed around their individual needs and those of their babies'.

Introduction

The National Collaborating Centre for Women's and Children's Health (NCC-WCH) was commissioned by the National Institute for Health and Clinical Excellence (NICE) as part of the Antenatal Care Guideline update to develop an Assessment Tool for midwives to use at a first antenatal booking appointment.

Method

The aim was to highlight those items which would identify women as requiring obstetric input into their antenatal care. Given the lack of clinical evidence in this area, it was felt that consensus methodology should be undertaken to decide the content of the assessment tool. The approach adopted was that of a modified Delphi. Delphi participants are generally specifically chosen for their particular expertise in a particular area in our survey they were self-selecting, although we specified that all respondents to the original survey should have an involvement with maternity care; individual specialists were not selected.

Development of an Online Survey

Drawing up the questions:

The possible topics for inclusion were drawn from three sources. Firstly, expert opinion was sought from the Antenatal Care Update Guideline development group (which consists of 2 midwives, 2 obstetricians, 1 GP, 2 service user representatives, 1 ultrasonographer and 1 public health specialist). Further topics were identified through a systematic review of the literature. Additional topics were then taken from a sample of antenatal booking notes (n=16). In total, 203 topics for possible inclusion in the tool were drawn up. These topics were then subdivided into six areas: Previous Pregnancies (n=61), Family Medical History (n=21), Past and existing medical problems (n=45), Current Pregnancy (n=18), Social Factors (n=35) and Personal Factors (n=23).

1st Consensus Round

The first round of consensus work consisted of an anonymous online survey accessible from the NCC-WCH website. We used online software at www.surveyconsole.com. The survey was aimed at all relevant stakeholder groups. This included midwives, obstetricians, service user representatives, paediatricians, and health visitors.

Publicity

The survey was publicised to the stakeholder groups through various channels:

- via letter to all of the Antenatal Care update Guideline Stakeholders
- letters to some heads of midwifery along with all of the board members of the NCC-WCH.
- adverts in BJOG, the RCOG newsletter and the RCM journal (Midwives).

- online advertisements on the corresponding websites to the journals, as well as on theRCN, NCC-WCH and NICE websites.
- publicised through NICE's Patient & Public Involvement Programme.

The online survey

The survey was accessible on-line for four weeks. Respondents to the survey were asked to rate each of the topics on a scale from 1 to 9 in terms of relative importance in deciding whether a woman required obstetric or midwife-led care, and thus whether the item ought to be included in an antenatal assessment tool. A score of 1 indicated that the respondent considered the topic 'not at all important' whilst a score of 9 was 'very important'. If a respondent felt unsure about a question or unable to answer, they moved on to the next question. To avoid exhaustion bias, the question order was randomised daily.

All respondents to the survey were given the chance to apply online to attend the second round of consensus work. In this way, we ensured that the second consensus sample was a sub-sample of the first.

Before conducting the survey, it had been decided that an overall median score of 1-3 for a topic would indicate consensus that it should not be included, a score of 7-9 that it should be included and a score of 4-6 that there was no overall consensus. However, analysis of the frequency distribution of the median scores from the survey showed a skew towards higher scores and so it was decided that a score of 8-9 would indicate consensus on inclusion, 1-3 would indicate consensus on exclusion, 5-7 would indicate no overall consensus and a score of 4 would be taken to an advisory panel.

The topics with median score 4 (n=14) were taken to the Antenatal Care update Guideline Development Group at the NCC-WCH – a panel of nine members. Each was asked to rate the topics in the same manner as the survey. It was decided previously that a median score of 1-3 would indicate consensus that the tool should not be included whilst any other score would indicate that the question should be taken to the second round of consensus work. 8 topics were excluded and 6 were taken forward to be voted on in the second round.

Results from the first consensus round

We received 731 online questionnaires which were at least partially complete, of which 566 were fully complete. 48% of the respondents were midwives, 19% healthcare consumers/consumer representatives, 16% medical staff including obstetricians (8.6% of total) and 17% other (which includes health visitors, antenatal teachers etc.) The overall completion to started rate was 48.1%.

Consensus on inclusion was reached on 78 of the topics and consensus on exclusion was reached on 19 of the topics. This left 106 topics to take forward to the consensus conference.

2nd/3rd Round

The second and third round of consensus voting took place during a one day conference consisting of survey respondents who had applied to attend (120 applied, 56 attended).

Selection Procedure

Applicants who wished to apply to attend the conference were asked to complete an online application form. As well as providing contact details, applicants were also asked to provide a supporting statement detailing their current involvement with maternity care. Participants were selected both on the basis of their supporting statement and their geographical location to ensure that as many regions of England and Wales as possible were represented. Originally, it was felt that the delegates should be made up of an equal number of midwives, obstetricians and healthcare consumers. However, after conducting sub-group analysis on the responses to the first round of voting, there was no statistical difference in median scores between the three groups. To confirm this, a randomised sample of the median scores of obstetricians and midwives was compared with the median scores from healthcare consumers. By inspection, there was no statistical difference between the results for the different groups. As a result, more midwives were invited (as many more midwives applied to attend than the other groups).

1 *Voting procedure*

2 At the conference, delegates were presented with those topics where consensus had not been
3 reached in the first round and asked to vote on each in turn using an electronic voting system
4 (supplied by Groupdynamics – www.groupdynamics.co.uk). After the questions were displayed
5 and read out, delegates were given 8 seconds to record their vote. As well as voting electronically,
6 participants were also asked to vote on a paper version so that they could compare their score with
7 the median for the group. The results of the vote on each question were displayed along with the
8 median score. After each topic had been voted on, a frequency distribution of the median scores
9 was analysed. It showed a skew towards lower scores and so it was decided that a median score of
10 7-9 indicated consensus on inclusion, 1-2 indicated consensus on exclusion and 3-6 indicated no
11 overall consensus. The delegates were then asked to vote on those remaining topics where no
12 consensus had been reached (n=39). In this round, each vote was preceded by a discussion
13 amongst the delegates in an attempt to achieve consensus.

14 *Results from the 2nd/3rd Round*

15 We reached consensus for inclusion on 14 topics, consensus for exclusion on 83 topics and no
16 overall consensus on 10 topics. From the discussion which followed, it became apparent that
17 further work should be conducted into further developing the tool in order to define a care
18 pathway for women with social risk factors who may benefit from the input of specialists other than
19 an obstetrician.

20 *Evidence statement*

21 This approach showed that it was possible to gain consensus on a range of potential risk factors
22 derived from a number of sources, including systematic reviews, to allow the development of an
23 assessment tool.

24 *Interpretation of evidence*

25 Although it has been possible to agree the basis of an assessment tool it requires further refinement
26 and validation before it can be applied in practice.

27 **Research Recommendation**

28 Multi-centred validation studies are required in the UK to assess the use of the Antenatal care
29 assessment tool. Using structured questions the tool aims to support the routine antenatal care of all
30 women by identifying women who may require additional care. The tool identifies women who:

- 31 • can remain within or return to the routine antenatal pathway of care
- 32 • may need additional obstetric care for medical reasons
- 33 • may need social support and/or medical care for a variety of socially complex reasons.

34